

REMARKS / ARGUMENTS

I. General Remarks and Disposition of the Claims

Please consider the application in view of the following remarks. Applicants thank the Examiner for his careful consideration of this application. At the time of the Office Action, claims 1-30 were pending in this application. Claims 1-3, 7-18, and 22-30 were rejected in the Office Action. Claims 4-6, and 19-21 were objected to in the Office Action. Applicants respectfully request reconsideration in light of the remarks contained herein.

II. Remarks Regarding Rejections under 35 U.S.C. § 103(a)

A. Patzek in view of Engler

Claims 1-3, 7-9, 13-18, 22-24, and 28-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 6,904,366 to Patzek et al. ("Patzek"), in view of Engler et al. in NPL "Analysis of pressure and pressure derivative without type curve matching, 4. Naturally fractured reservoirs" ("Engler"). Applicants respectfully disagree. In particular, the combination of Patzek and Engler fails to teach or suggest at least "injecting an injection fluid into the formation at an injection *pressure exceeding the formation fracture pressure*," as recited by independent claims 1, 15, and 28. In contrast, Patzek *teaches away* from injecting at pressure exceeding the formation fracture pressure. For example, Patzek states that "A purpose contemplated by the instant invention is *preventing* and controlling otherwise uncontrollable *growth of injection hydrofractures* and unrecoverable damage of reservoir rock formations *by the excessive or otherwise inappropriate* fluid injection." Col. 6, ll. 46-50. In other words, Patzek seeks to *avoid* hydrofractures caused by excessive fluid injection. Patzek reiterates the point, stating: "An injection rate or pressure that is too high may dramatically increase the fracture growth rate and eventually leads to a *catastrophic* fracture extension and unrecoverable water channeling between an injector and a producer. In order to *avoid* fatal reservoir damage, smart injection controllers should be deployed, as developed in this invention." Col. 8, ll. 59-65. Further, the Patzek passage noted in the Final Office Action points out that "[w]hen excess injector pressure is used, the geological strata (or layer) containing the oil can be crushed (or hydrofractured). The growth of such hydrofractures can cause a direct conduit from an injector to a producer, whereby no further oil is produced, and water is simply

pumped in the injector, conducted through the hydrofractured conduit, and recovered at the producer through a process known as ‘channeling.’ *At this juncture, the injector is no longer useful in its function, and is now known as a failed, dead, or lost well.*” Col. 1, ll. 46-55. In other words, when “excess” pressure is used, the injector is not useful for its intended purpose. Thus, Applicants assert that Patzek fails to disclose “injecting an injection fluid into the formation at an injection *pressure exceeding the formation fracture pressure*,” because Patzek indicates that injecting at such “excess” pressure should be prevented to avoid unrecoverable, fatal damage to the reservoir. Moreover, Engler fails to obviate the deficiencies of Patzek. Accordingly, the combination of Patzek and Engler fails to establish that every limitation of independent claims 1, 15, and 28 was known in the prior art.

Therefore, Applicants respectfully assert that independent claims 1, 15, and 28 and their dependent claims are not rendered obvious by the combination of Patzek and Engler. Accordingly, Applicants respectfully request withdrawal of this rejection with respect to claims 1-3, 7-9, 13-18, 22-24, and 28-30.

B. Patzek in view of Engler and Espinosa-Paredes

Claims 10, 12, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patzek and Engler in view of Espinosa-Paredes et al. in NPL “Estimation of static formation temperatures in geothermal wells” (“Espinosa-Paredes”). Applicants respectfully disagree. As indicated above, Patzek and Engler fail to teach or suggest “injecting an injection fluid into the formation at an injection *pressure exceeding the formation fracture pressure*,” as recited by independent claims 1 and 15. Moreover, Espinosa-Paredes fails to obviate the deficiencies of Patzek and Engler. Accordingly, the combination of Patzek, Engler, and Espinosa-Paredes fails to establish that every limitation of independent claims 10 and 15 was known in the prior art.

Therefore, Applicants respectfully assert that independent claims 1 and 15 and their dependent claims 10, 12, 25, and 27 are not rendered obvious by the combination of Patzek, Engler, and Espinosa-Paredes. Accordingly, Applicants respectfully request withdrawal of this rejection with respect to claims 10, 12, 25, and 27.

III. Allowable Subject Matter

In the Office Action, the Examiner noted that claims 4-6, and 19-21 are objected to as being dependent upon a rejected base claim, but would be "allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." (Office Action at Page 15.) Applicants gratefully acknowledge the Examiner's indication that claims 4-6, and 19-21 are allowable. However, since Applicants have traversed the rejections of claims 1 and 15, which are the base claims of claims 4-6, and 19-21, Applicants respectfully submit that claims 4-6, and 19-21 are allowable as well.

IV. No Waiver

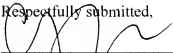
All of Applicants' arguments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the cited references. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements, such as, for example, any statements relating to what would be obvious to a person of ordinary skill in the art, or what is inherent.

SUMMARY

In light of the above remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Applicants believe that no fees are due in association with the filing of this response. Should the Commissioner deem that any fees are due, including any fees for extensions of time, Applicants respectfully request that the Commissioner accept this as a Petition Therefor, and direct that any additional fees be charged to McDermott Will & Emery's Deposit Account No. 500417, Order Number 086108-0112.

Respectfully submitted,



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